

### **REMARKS**

Reconsideration of the application is respectfully requested.

#### **I. Status of the Claims**

Claims 1-12 are pending. Claims 1 and 8 are presently amended and new claim 12 is added. Claims 2 and 6, 7, 9 and 10 are cancelled. No new matter is added. Support for the amendments may be found, for example, with reference to Applicants' specification at Table 1.

#### **II. Claim Interpretation**

The Examiner states that claims 1-12 should be read as encompassing any crystals having an average size above 30 nm or greater and crystal grains having an average size of 10 microns or greater. Claim 1 has been amended to restrict the average crystal grain size to an upper limit of 20 microns for the average crystal grain size.

#### **III. Rejections under 35 U.S.C. § 112, first paragraph**

Claim 10 is rejected as failing to comply with the written description requirement. Claim 10 has been cancelled and Examiner's rejection is therefore moot.

#### **IV. Rejections under 35 U.S.C. § 103**

Claims 1 to 9 and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,800,636 to Tsukada et.al. ("Tsukada").

The Examiner supports his rejection by stating that Tsukada teaches a soft magnetic iron powder with a particle size of 75 to 200 microns, which falls within the range of the Applicants' claims. The Examiner states that Tsukada is silent with respect to the average crystal size and the average crystal grain size and does not limit the crystal size and crystal grain size of the metal powder.

The Examiner takes the position that the properties of crystal size and crystal grain size are inherent in Tsukada and further states that based on the interpretation of claim 1, the claims are not limited to small crystal sizes as there is no upper limit in the claims. Claim 1 has been amended to reference an average crystal grain size between 10 and 20 microns and therefore now has an upper limit.

Applicants respectfully traverse the Examiner's rejection.

Applicants' claimed invention requires that the crystals forming the claimed soft magnetic powder have crystal grains having an average size between 10 and 20 microns. (See page 3, 4, paragraphs 0042, 0044-0048 and Table 1 of Applicant's Specification of U.S. Publication 2006/0216507 A1). In sharp contrast to Applicants' claimed material, Tsukada does not describe or otherwise suggest characteristics relating to crystal size or crystal grain size of a soft iron powder product. However, even assuming *arguendo* that Tsukada's particles are crystalline, those particles do not necessarily have the same properties as the Applicants' particles because (1) Tsukada does not teach the crystal and crystal grain size of Applicants' invention, (2) Tsukada discloses that the heat treatment affects grain size, and (3) Tsukada and Applicants' invention disclose different heat treatment processes.

Tsukada does not disclose or suggest an average crystal grain size as small as 20 microns. Tsukada also describes a heat treatment process that requires at least 1200°C to work. In fact, in column 8, lines 16–25, Tsukada states that the heat temperature process that is used to create the iron powder in the patent, when performed at a temperature lower than 1200°C, is insufficient for causing crystal grains to grow and fails to provide a low coercivity. (Tsukada, col. 8, lines 16–19). Applicants' process temperatures range between 100°C to no more than 1000°C and crystal grains do grow, based on the Applicants' specification. Yet Tsukada clearly states that altering the process used by Tsukada to create the soft iron powder would mean that crystal grains would not grow or would grow at a different rate.

It is clear that one of ordinary skill in the art would not expect Tsukada and the Applicants' invention to have the same average crystal and crystal grain size based on the disclosure in Tsukada and due to the different heat treatment processes of the two inventions. In fact, one of ordinary skill in the art would expect for Tsukada and Applicants' invention to have different crystal grain size, based on the disclosures made by each as to the manufacturing processes.

Furthermore, this argument is not based on conclusory statements in the specification of either Tsukada or Applicants. These statements were made by the inventors of Tsukada to explain a chosen lower temperature limit of their process. Applicant's specification shows that the lower temperature limit used in the process does not affect the properties of its crystals and particles – properties of particles and crystals that Tsukada states are unreachable if the process temperature is lowered.

Based on this, it is not absolutely certain that the crystal size and crystal grain size of Applicants' claimed particles are inherent to the particles disclosed by Tsukada based on the other listed characteristics in each of Applicants' and Tsukada's disclosure. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex part Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in the original). Without more information and based on the reasoning above taken from statements from both specifications, it is in no way certain that the average crystal size and average crystal grain size claimed by Applicants' are realized in Tsukada's powder. Therefore the burden of inherency argument falls back on the Examiner.

For at least these reasons, Applicants respectfully submit that claim 1 is not anticipated by Tsukada and stands in condition for allowance. As all other claims depend directly or indirectly from allowable independent claim 1, Applicant further submits that all dependent claims are also allowable for at least this reason.

Claims 2 and 6, 7, 9 and 10 are cancelled and the Examiner's rejections in regards to these claims are now moot. Applicant therefore respectfully requests that the rejection of claims 1 and 3-5 under 35 U.S.C. §103(a) be withdrawn.

#### **SUMMARY OF NEW CLAIMS**

New dependent claim 12 does not add new matter and depends indirectly from allowable independent claim 1. Therefore, for at least these reasons, the new claim is allowable.

**CONCLUSION**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

The Examiner is respectfully requested to contact the undersigned at the telephone number indicated below once he has reviewed the proposed amendment if the Examiner believes any issue can be resolved through either a Supplemental Response or an Examiner's Amendment.

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Respectfully submitted,

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